



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/705,384	11/10/2003	Pierre Liu	2011133	4323
47625	7590	05/03/2006	EXAMINER	
PRO-TECTOR INTERNATIONAL SERVICES			TRAN, LONG K	
20775 NORADA CT.			ART UNIT	PAPER NUMBER
SARATOGA, CA 95070			2818	

DATE MAILED: 05/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/705,384

Applicant(s)

LIU, PIERRE

Examiner

Long K. Tran

Art Unit

2818

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on AMDT on 03/13/2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Amendments

1. Applicant is reminded of the proper format for amendment under Revised Amendment Practice (37 CFR 1.121) as applied to Implement Electronic Maintenance of Official Patent Application Records and as applied to amendments filed after July 30, 2003, which dictates, among many other changes, that the text of withdrawn claims must be presented. Another important change is "Markings to Show Changes" as applied to the specification and the claims.

Although the amendment to the claims filed 03/13/2006 does not fully comply with the mentioned Amendment Practice, the amendment includes all pertinent information and therefore is accepted for examination. However, Applicant must comply with 37 CFR 1.121 in preparing future responses.

For a sample amendment document and other questions concerning the new practice, please visit the USPTO website at:

[http://www.uspto.gov/web/offices/pac/dapp/opla/preognotice/moreinfoamdtprac.h
tm.](http://www.uspto.gov/web/offices/pac/dapp/opla/preognotice/moreinfoamdtprac.htm)

For purposes of examination, the clean version of the claims, filed on 03/13/06, will replace all prior versions.

Claim Objections

2. Claim 2 is objected to because of the following informalities:

Claim 2: line 2, change “wherein the memory” to -- wherein another memory -- because “the memory” refers to “at least one memory chip, which arranged on the upper surface of the substrate”.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1 and 3 are rejected under 35 U.S.C. 102(e) as being anticipated by Hsu et al. (US Patent Application Publication No. 2003/0193826).

Regarding claim 1, Hsu discloses a small memory card (30, figs. 2 - 3), comprising:

a multilayer substrate A (fig. 3' modified by the examiner for examination purposes, the multilayer substrate (32, figs. 2 – 3) having an upper surface and a lower surface, the upper surface formed with a plurality of connected points (not labeled, figs. 2 – 3) and a plurality of golden fingers (64, fig. 3), electrically connected to the plurality of connected points (interface control unit 52; [0014] – [0017]), the substrate (32) is used to set in the electronic device (34, 36, 52, 54, 58, 60 (figs. 2 – 3), so that the

Art Unit: 2818

plurality of golden fingers 38 may be electrically connected to the electric device ([0017]);

at least one memory chip 26 (figs. 2 - 3), which is arranged on the upper surface of the substrate (32), and electrically connected to a plurality of connected points on the upper surface; and

a transparent glue layer (38; figs. 2 - 3; [0015]) encapsulated the memory chip (34, 36, 52, 54, 58, 60 (figs. 2 - 3). Since transparent glue 38 is used to protect the memory chip, mark (if any) of the memory chip or the substrate are inherently being displayed.

Regarding claim 3, Hsu discloses the upper surface of the substrate is arranged two memory chips (34,36; figs. 2 - 3) encapsulated by transparent layer (38).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hsu et al. (US Patent Application Publication No. 2003/0193826) in view of Yoshimura (US Patent No. 5,394,300).

7. Regarding claim 2, Hsu discloses the claimed invention of claim 1 except for another memory chip is located on the lower surface of the substrate.

However, Yoshimura shows a thin IC memory card having memory IC chips (2; figs. 1 – 3; column 2, lines 31 – 60) located on an upper and a lower surface of substrate (1; figs. 1 – 3) to increase the capacity of an IC memory card (column 1, lines 5 – 37).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the memory card of Hsu with the structure having memory chip on the lower surface of the substrate as taught by Yoshimura in order to increase the capacity of the thin IC memory card.

8. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hsu et al. (US Patent Application Publication No. 2003/0193826) as evident by Son et al. (US Patent Application Publication No. 2003/0197261).

Regarding claim 4, Hsu discloses the memory chip is electrically connected to the connected points of the upper surface of the substrate but does not teach the memory chip is electrically connected to the connected points of the upper surface of the substrate by wires. However, it is well known in the art that the chips electrically connected to the substrate by either one of conventional bumps and bonding wires. Reference to Son ((fig.2c; [0010]) showing bonding wires 425a, 425b connect memory device (411) and (415) to the card substrate (421)) is cited of showing the fact, but not used in the rejection.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to employ a known conventional wire connection as shown by Son to electrically connect the memory chip to points of the upper surface of the substrate, since it has been held to be within the general skill of a worker in the art to select a known material and method on the basis of its suitability for a specific application.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Long K. Tran whose telephone number is 571-272-1797. The examiner can normally be reached on Mon-Thu.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms can be reached on 571-272-1787. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LKT

April 17, 2006

